

INPUT/OUTPUT ARCHITECTURE FOR INTEGRATED CIRCUITS**ABSTRACT OF THE DISCLOSURE**

A described embodiment of the present invention includes an integrated circuit having a plurality of I/O modules. The I/O modules include a bond pad formed on a substrate. The I/O modules also include an electrostatic discharge device formed in the substrate. The electrostatic discharge device is at least partially formed beneath the bond pad. The I/O module also includes an I/O buffer formed in the substrate. The I/O buffer is connected to the bond pad. The I/O buffer provides communication between the bond pad and circuitry formed in the substrate. The circuitry is positioned substantially adjacent to both the electrostatic discharge device and the I/O buffer.